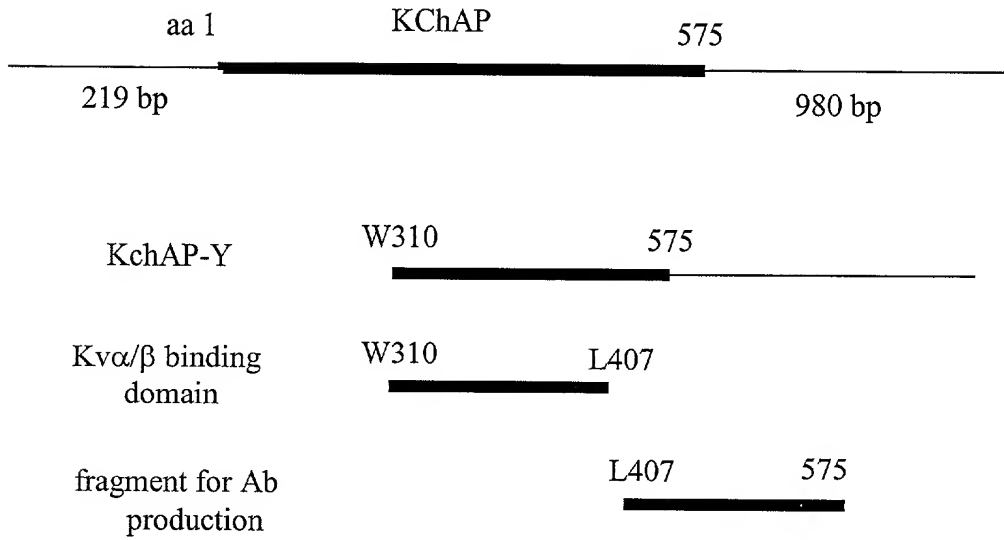


Title: **PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON
CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME**

Inventors Name: Brown, et al.

Attorney Docket Number: 222884/04066

Fig. 1



Title: **PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON
CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME**

Inventors Name: Brown, et al.

Attorney Docket Number: 222884/04066

Fig. 2A

atgaagatcaaagaactttaccgcaggcgctttccccggaagaccctggggccttccgat
1 -----+-----+-----+-----+-----+-----+ 60
M K I K E L Y R R R F P R K T L G R S D -

ctctcttttgtctctctttgccccctggcacctctcctgtaggetccccagcccccttgc
61 -----+-----+-----+-----+-----+-----+ 120
L S L L S L P P G T S P V G S P S P L A -

A
p
a
I
tccattcctccaccctcctgaccctggcaccttgcctgggcccctaagcgtgaggtggac
121 -----+-----+-----+-----+-----+-----+ 180
S I P P T L L T P G T L L G P K R E V D -

A
a
t
I
I
atgcaccctcctctgccccagcctgtgcaccctgacgtcaccatgaaaccactgcccttc
181 -----+-----+-----+-----+-----+-----+ 240
M H P P L P Q P V H P D V T M K P L P F -

E
a
g
I
tacgaagtctacggagagctcatccggccgaccacccttgcgtccacctccagtcagagg
241 -----+-----+-----+-----+-----+-----+ 300
Y E V Y G E L I R P T T L A S T S S Q R -

P
v p
u s
I t
I I
tttgaggaagcccactttacctttgcactcactccccagcagctgcagcagattctcaca
301 -----+-----+-----+-----+-----+-----+ 360
F E E H H F T F A L T P Q Q L Q Q I L T -

20250401 10:54:00

Title: **PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON
CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME**

Inventors Name: Brown, et al.
Attorney Docket Number: 222884/04066

Fig. 2B

361 tccagggaggttctgccaggagccaagtgcgattataccatacaagtgcagctcaggttc 420
-----+-----+-----+-----+-----+-----+
S R E V L P G A K C D Y T I Q V Q L R F -

P
v
u
I
I

421 tgtctctgtgagaccagctgccccaggaggactatttccccctaacctctttgtcaag 480
-----+-----+-----+-----+-----+-----+
C L C E T S C P Q E D Y F P P N L F V K -

B
s
t
E
I
I

481 gttaatgggaaactctgccccctgccgggttacctccctccaaccaagaatggagctgag 540
-----+-----+-----+-----+-----+-----+
V N G K L C P L P G Y L P P T K N G A E -

S
t
u
I

541 cccaagaggcctagtcgtccaatcaacatcacacccctggctcgtctctcagccactgtt 600
-----+-----+-----+-----+-----+-----+
P K R P S R P I N I T P L A R L S A T V -

H
p
a
I

601 cccaacaccatagtggttaactggtcatctgagtttggacggaattactccttgtctgtg 660
-----+-----+-----+-----+-----+-----+
P N T I V V N W S S E F G R N Y S L S V -

20050420

Title: **PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME**

Inventors Name: Brown, et al.
Attorney Docket Number: 222884/04066

Fig. 2C

p s B
 s s s
 t t W
 I I I

661 tacctggtgaggcagttgactgcagggaccctgctacaaaagctcagagccaagggtatc 720
 -----+-----+-----+-----+-----+-----+-----+
 Y L V R Q L T A G T L L Q K L R A K G I -

A
 v
 a
 I

721 cggaatccagaccattccccgagcactgatcaaggagaaattgactgctgacccccgacagt 780
 -----+-----+-----+-----+-----+-----+-----+
 R N P D H S R A L I K E K L T A D P D S -

781 gaagtggctactacaagtctccgggtgtcactcatgtgcccgcctggggaagatgcgcctg 840
 -----+-----+-----+-----+-----+-----+-----+
 E V A T T S L R V S L M C P L G K M R L -

P
 s
 t
 I

841 actgtcccatgccgcgctctcacctgtgcccacctgcagagtttcgatgctgccctttat 900
 -----+-----+-----+-----+-----+-----+-----+
 T V P C R A L T C A H L Q S F D A A L Y -

901 ctacagatgaatgagaaaaagccaacatggacgtgccctgtgtgtgacaagaaggctccc 960
 -----+-----+-----+-----+-----+-----+-----+
 L Q M N E K K P T W T C P V C D K K A P -

961 tatgagtcactgattattgatgggtttattcatggaaattcttaattcctgttcggattgt 1020
 -----+-----+-----+-----+-----+-----+-----+
 Y E S L I I D G L F M E I L N S C S D C -

P B
 f a
 l m
 M H
 I I

1021 gatgagatccagttcatggaagatggatcctgggtgtccaatgaaaccaagaaggaggca 1080
 -----+-----+-----+-----+-----+-----+-----+
 D E I Q F M E D G S W C P M K P K K E A -

2007-04-04

Inventors Name: Brown, et al.
Attorney Docket Number: 222884/04066

Fig. 2D

P
 f
 l
 M
 I
 tccgagggtttgccccccaccagggtatgggctggatgggtctccagtatagcccagtcag
 1081-----+-----+-----+-----+-----+-----+-----+ 1140
 S E V C P P P G Y G L D G L Q Y S P V Q -
 gagggaaatcagtcagagaataagaagagggttgaagtcattgacttgacaatcgaaagc
 1141-----+-----+-----+-----+-----+-----+-----+ 1200
 E G N Q S E N K K R V E V I D L T I E S -
 B
 g
 l
 I
 I
 tcatcagatgaggaagatctgccccccaccaagaagcactgccttgttacctcggctgcc
 1201-----+-----+-----+-----+-----+-----+-----+ 1260
 S S D E E D L P P T K K H C P V T S A A -
 B
 s
 t
 E
 I
 I
 attccagcccttctggaagcaaaggagccctgacctctggtcaccagccgtcttcgggtg
 1261-----+-----+-----+-----+-----+-----+-----+ 1320
 I P A L P G S K G A L T S G H Q P S S V -
 ctgcgaggagccctgcaatgggtacactgggcagtgatttctgtctagtctcccactacat
 1321-----+-----+-----+-----+-----+-----+-----+ 1380
 L R S P A M G T L G S D F L S S L P L H -
 gagtaccacactgccttcccgcctgggggctgacatccaagggttagatttattttctttc
 1381-----+-----+-----+-----+-----+-----+-----+ 1440
 E Y P P A F P L G A D I Q G L D L F S F -
 cttcagactgagagtcagcactacagcccttcagttatcacttcactagatgagcaggac
 1441-----+-----+-----+-----+-----+-----+-----+ 1500
 L Q T E S Q H Y S P S V I T S L D E Q D -

THE

Title: **PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME**

Inventors Name: Brown, et al.
Attorney Docket Number: 222884/04066

Fig. 2E

P
f A
l p
M a
I I

```

acccttgggccacttcttccaattccggggaacccctccccacttccctgggcccactggcc
1501-----+-----+-----+-----+-----+-----+-----+ 1560
T L G H F F Q F R G T P P H F L G P L A -

cccacattggggagctctcaccgcagcgccactccagcaccccgctcctggccgtgtcagc
1561-----+-----+-----+-----+-----+-----+-----+ 1620
P T L G S S J R S A T P A P A P G R V S -

                                     B
                                     s
                                     a
                                     W
                                     I
agcattgtggctcctgggagttccttgaggggaagggcatggaggacccctgccttccggt
1621-----+-----+-----+-----+-----+-----+-----+ 1680
S I V A P G S S L R E G H G G P L P S G -

                                     A
                                     a
                                     t
                                     I
                                     I
ccctctttgactggctgtcggtcagacgtcatttccttggactga
1681-----+-----+-----+-----+-----+-----+ 1725
P S L T G C R S D V I S L D * -

```

Enzymes that do cut:

AatII	ApaI	AvaI	BamHI	BglII	BsaWI	BstEII	EagI
HpaI	PflMI	PstI	PvuII	StuI			

Enzymes that do not cut:

AgeI	AseI	BbrPI	BfrI	BsaBI	BsmI	BssHII	BstbI
BstXI	ClaI	DraI	DraIII	EcoRI	HindIII	KpnI	MluI
NarI	NcoI	NdeI	NheI	NotI	NruI	NsiI	PmlI
PvuI	SacII	SalI	SauI	ScaI	SfiI	SmaI	SnaBI
SpeI	SspI	XbaI	XhoI				

Title: **PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME**

Inventors Name: Brown, et al.
Attorney Docket Number: 222884/04066

Fig. 3A

A
p
a
I

atgaagatcaaagagctttaccgacgacgctttccccggaagaccctggggccctctgat
1 -----+-----+-----+-----+-----+-----+-----+ 60
M K I K E L Y R R R F P R K T L G P S D -

ctctcccttctctctttgccccctggcacctctcctgtaggctccctgggtcctctagct
61 -----+-----+-----+-----+-----+-----+-----+ 120
L S L L S L P P G T S P V G S P G P L A -

A
p
a
I

cccatcccccaacgctgttgccccctggcacccctgctgggcccccaagcgtgaggtggac
121 -----+-----+-----+-----+-----+-----+-----+ 180
P I P P T L L A P G T L L G P K R E V D -

atgcacccccctctgccccagcctgtgcaccctgatgtcaccatgaaaccattgcccttc
181 -----+-----+-----+-----+-----+-----+-----+ 240
M H P P L P Q P V H P D V T M K P L P F -

tatgaagtctatggggagctcatccggcccaccacccttgcacccacttctagccagcgg
241 -----+-----+-----+-----+-----+-----+-----+ 300
Y E V Y G E L I R P T T L A S T S S Q R -

tttgaggaagcgcactttacctttgccctcacaccccagcaagtgcagcagattctttaca
301 -----+-----+-----+-----+-----+-----+-----+ 360
F E E A H F T F A L T P Q Q V Q Q I L T -

tccagagaggttctgccaggagccaaatgtgattataccatacaggtgcagctaagggttc
361 -----+-----+-----+-----+-----+-----+-----+ 420
S R E V L P G A K C D Y T I Q V Q L R F -

P
v
u
I
I

tgtctctgtgagaccagctgccccaggaagattattttcccccaacctctttgtcaag
421 -----+-----+-----+-----+-----+-----+-----+ 480
C L C E T S C P Q E D Y F P P N L F V K -

2007-01-14 14:05:00

Title: **PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON
CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME**

Inventors Name: Brown, et al.

Attorney Docket Number: 222884/04066

Fig. 3B

B
S
t
E
I
I

gttaatgggaaactgtgccccctgccgggttaccttccccaaccaagaatggggccgag
481 -----+-----+-----+-----+-----+-----+ 540
V N G K L C P L P G Y L P P T K N G A E -

cccaagaggcccagccgccccatcaacatcacaccctggctcgactctcagccactgtt
541 -----+-----+-----+-----+-----+-----+ 600
P K R P S R P I N I T P L A R L S A T V -

cccaacaccattgtgggtcaattgggtcatctgagttcggacggaattactccttgtctgtg
601 -----+-----+-----+-----+-----+-----+ 660
P N T I V V N W S S E F G R N Y S L S V -

P S t I P S a W I
tacctgggtgaggcagttgactgcaggaacccttctacaaaaactcagagcaaagggatatc
661 -----+-----+-----+-----+-----+-----+ 720
Y L V R Q L T A G T L L Q K L R A K G I -

cggaaccagaccactcgcgggcactgatcaaggagaaattgactgctgaccctgacagt
721 -----+-----+-----+-----+-----+-----+ 780
R N P D H S R A L I K E K L T A D P D S -

gaggtggccactacaagtctccgggtgtcactcatgtgcccgctaggaagatgacgctg
781 -----+-----+-----+-----+-----+-----+ 840
E V A T T S L R V S L M C P L G K M R L -

P S t I
actgtcccttgtcggtgccctcacctgtgccacctgcagagcttcgatgctgccctttat
841 -----+-----+-----+-----+-----+-----+ 900
T V P C R A L T C A H L Q S F D A A L Y -

ctacagatgaatgagaagaagcctacatggacatgtcctgtgtgtgacaagaaggctccc
901 -----+-----+-----+-----+-----+-----+ 960
L Q M N E K K P T W T C P V C D K K A P -

Title: PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON
CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME

Inventors Name: Brown, et al.
Attorney Docket Number: 222884/04066

Fig. 3C

tatgaatctcttatcattgatgggtttatattatggagattcttagttcctgttcagattgt
961-----+-----+-----+-----+-----+-----+ 1020
Y E S L I I D G L F M E I L S S C S D C -

P B
f a
l m
M H
I I

gatgagatccaattcatggaagatggatcctgggtgcccaatgaaacccaagaaggaggca
1021-----+-----+-----+-----+-----+-----+ 1080
D E I Q F M E D G S W C P M K P K K E A -

P
f
l
M
I

tctgagggttgcccccgccagggtatgggctggatggcctccagtacagcccagtcag
1081-----+-----+-----+-----+-----+-----+ 1140
S E V C P P P G Y G L D G L Q Y S P V Q -

gggggagatccatcagagaataagaagaagggtcgaagttattgacttgacaatagaaagc
1141-----+-----+-----+-----+-----+-----+ 1200
G G D P S E N K K K V E V I D L T I E S -

P
v
u
I
I

tcatcagatgaggaggatctgccccctaccaagaagcactgttctgtcacctcagctgcc
1201-----+-----+-----+-----+-----+-----+ 1260
S S D E E D L P P T K K H C S V T S A A -

atcccgccctacctggaagcaaaggagtcctgacatctggccaccagccatcctcggtg
1261-----+-----+-----+-----+-----+-----+ 1320
I P A L P G S K G V L T S G H Q P S S V -

ctaaggagccctgctatgggcacgttgggtggggatttctgtccagttctcccactacat
1321-----+-----+-----+-----+-----+-----+ 1380
L R S P A M G T L G G D F L S S L P L H -

gagtaccacctgccttcccactgggagccgacatccaagggttagattttattttcattt
1381-----+-----+-----+-----+-----+-----+ 1400
E Y P P A F P L G A D I Q G L D L F S F -

405674-001

Title: **PROTEIN THAT ENHANCES EXPRESSION OF POTASSIUM CHANNELS ON CELL SURFACES AND NUCLEIC ACIDS THAT ENCODE THE SAME**

Inventors Name: Brown, et al.
Attorney Docket Number: 222884/04066

Fig. 3D

cttcagacagagagtcagcactatggccctctgtcatcacctcactagatgaacaggat
1441-----+-----+-----+-----+-----+-----+-----+ 1500
L Q T E S Q H Y G P S V I T S L D E Q D -

gccttggccacttcttccagtaaccgagggaccccttctcactttctgggccactggcc
1501-----+-----+-----+-----+-----+-----+-----+ 1560
A L G H F F Q Y R G T P S H F L G P L A -

cccacgctggggagctcccactgcagcgccactccggcgccccctcctggccgtgtcagc
1561-----+-----+-----+-----+-----+-----+-----+ 1620
P T L G S S H C S A T P A P P P G R V S -

agcattgtggccctgggggggccttgagggaggggcatggaggaccctgcctcaggt
1621-----+-----+-----+-----+-----+-----+-----+ 1680
S I V A P G G A L R E G H G G P L P S G -

ccctctttgactggctgtcggtcagacatcatttccttgactga
1681-----+-----+-----+-----+-----+-----+ 1725
P S L T G C R S D I I S L D * -

A
p
a
I

P N
s a
t r
I I

S
a
u
I

Enzymes that do cut:

Apal	BamHI	BsaWI	BstEII	NarI	PflMI	PstI	PvuII
SauI							

Enzymes that do not cut:

AatII	AgeI	AseI	AvaI	BbrPI	BfrI	BglII	BsaBI
BsmI	BssHII	BstBI	BstXI	ClaI	DraI	DraIII	EagI
EcoRI	HindIII	HpaI	KpnI	MluI	NcoI	NdeI	NheI
NotI	NruI	NsiI	PmlI	PvuI	SacII	SalI	Scal
SfiI	SmaI	SnaBI	SpeI	SspI	StuI	XbaI	XhoI

Inventors Name: Brown, et al.
Attorney Docket Number: 222884/04066

1	MKIKELYRRRFPRKTLGPSDSLSSLLSLPPGTSPVGSPGPLAPIPPTLLAPG	50
1	MKIKELYRRRFPRKTLGPSDSLSSLLSLPPGTSPVGSPSPLASIPPTLLTPG	50
51	TLLGPKREVDMHPPLPQPVHPDVTMKPLPFYEVYGELIRPTTLLASTSSQR	100
51	TLLGPKREVDMHPPLPQPVHPDVTMKPLPFYEVYGELIRPTTLLASTSSQR	100
101	FEEAHFTFALTPQQVQQIILTSREVLPGAKCDYTIQVQLRFCLCETSCPQE	150
101	FEEAHFTFALTPQQVQQIILTSREVLPGAKCDYTIQVQLRFCLCETSCPQE	150
151	DYFPPNLFVKVNGKLCPLPGYLPPTKNGAEPKRPSRPINITPLARLSATV	200
151	DYFPPNLFVKVNGKLCPLPGYLPPTKNGAEPKRPSRPINITPLARLSATV	200
201	PNTIVVNWSSEFGRNYSLSVYLVRQLTAGTLLQKLRAKGIRNPDHSRALI	250
201	PNTIVVNWSSEFGRNYSLSVYLVRQLTAGTLLQKLRAKGIRNPDHSRALI	250
251	KEKLTADPDSEVATTSLRVSLMCPLGKMRLTVPCRALTCAHLQSFDAALY	300
251	KEKLTADPDSEVATTSLRVSLMCPLGKMRLTVPCRALTCAHLQSFDAALY	300
301	LQMNEKKPTWTCPVCDKKAPYESLIIDGLFMEILSSCSDCDEIQFMEDGS	350
301	LQMNEKKPTWTCPVCDKKAPYESLIIDGLFMEILNSCSDCDEIQFMEDGS	350
351	WCPMKPKKEASEVCPPPGYGLDGLQYSPVQGGDPSENKKKVEVIDLTIES	400
351	WCPMKPKKEASEVCPPPGYGLDGLQYSPVQEGNQSENKKRVEVIDLTIES	400
401	SSDEEDLPPTKKHCSVTSAAIPALPGSKGVLTSGHQPSVLRSPAMGTLG	450
401	SSDEEDLPPTKKHCPVTSAAIPALPGSKGALTSGHQPSVLRSPAMGTLG	450
451	GDFLSSSLPLHEYPPAFPLGADIQGLDLFSFLQTESQHYGPSVITSLDEQD	500
451	SDFLSSSLPLHEYPPAFPLGADIQGLDLFSFLQTESQHYSPSVITSLDEQD	500
501	ALGHFFQYRGTPSHFLGPLAPTLGSSHCSATPAPPPGRVSSIVAPGGALR50	
501	TLGHFFQFRGTPPHFLGPLAPTLGSSHRSATPAPAPGRVSSIVAPGSSLR	550
551	EGHGGPLPSGPSITGCRSDIISLD*	575
551	EGHGGPLPSGPSITGCRSDVISLD*	575